

CONNECTING ROD

Abstract

An adjustable connecting rod system includes a reliable, rapidly responsive mechanism for varying effective connecting rod length to vary the compression ratio of the engine. The mechanism may employ the momentum of connecting rod components during operation of the engine to provide actuation force to vary connecting rod length. Connecting rod length is preferably controlled by manipulation of fluid-actuated locking members. In a preferred embodiment, hydraulic pressure is applied through the use of engine oil or other hydraulic fluids. The connecting rod preferably employs one or more movable compression members such as roller members or other mechanical components that may be shifted from one position to another with relatively little friction in order to vary the effective length of the connecting rod. The movable compression members may engage surfaces of both the crankpin bearing retainer and the connecting rod body, loaded in compression to transmit forces therebetween.